Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Original) A method for monitoring the presence of selected chromophores in a sample of epithelial tissue, independent of the amount of a predetermined chromophore, the method comprising:

illuminating an area of tissue by projecting light from a light source of at least two different wavelengths λ_1, λ_2 ;

receiving light remitted by the illuminated area of tissue at a photoreceptor; analysing the received light to obtain a measurement $R_t(\lambda)$ for each wavelength and then calculating:

$$Z = \frac{R_t(\lambda_1)}{R_t(\lambda_2)^l}$$ where l is chosen such that Z is independent of the amount of predetermined chromophore.

2. (Original) A method according to claim 1, in which $R_t(\lambda)$ is calculated by

analysing the received light to identify and measure the proportion of light of each wavelength remitted from the tissue $I_r(\lambda)$; and calculating the ratio of light at each wavelength returned from the tissue $R_t(\lambda)$.

3. (Currently amended) A method according to claim 1 ~~or 2~~, in which l is calculated

such that

$$Z = \frac{R_t\ (c,h,\lambda_1)^j}{R_t\ (c,h,\lambda_2)^{jk}} = \frac{R_t(\lambda_1)^j}{R_t(\lambda_2)^{jk}} = \frac{R_t(\lambda_1)}{R_t(\lambda_2)^l}$$ where j and k are such that:

$2j\alpha(\lambda_1) = 2kj\alpha(\lambda_2) = 1$ where $\alpha(\lambda_1)$ and $\alpha(\lambda_2)$ are the absorbtion coefficients for the predetermined chromophore at each wavelength.

4. (Currently amended) A method according to ~~any one of the preceding claims~~ claim 1, in which the predetermined chromophore is melanin.

5. (Currently amended) A method according to ~~any one of claims 1 to 4~~ claim 1, in which the predetermined chromophore is haemoglobin.

6. (Currently amended) A method according to ~~any one of the preceding claims~~ claim 1, in which the epithelial tissue is skin.

7. (Currently amended) A method according to ~~any one of the preceding claims~~ claim 1, in which the wavelengths λ_1, λ_2 are chosen such that a change in collagen level causes a relatively small change in the absorbtion of λ_1, and a relatively large change in the absorbtion of λ_2.

8. (Original) A method according to claim 7, in which the difference between the two

wavelengths λ_1, λ_2 is at least 200 nm.

9. (Original) A method according to claim 8, in which the wavelengths are substantially 700 nm and 940nm respectively.

10. (Original) A method of forming an image of an area of epithelial tissue independent of the amount of a predetermined chromophore in the tissue, locations, formed by obtaining Z for a plurality of locations within the area, Z being obtained by illuminating an area of tissue by projecting light from a light source of at least two different wavelengths λ_1, λ_2 ;

receiving light remitted by the illuminated area of tissue at a photoreceptor;

analysing the received light to analysing the received light to obtain a measurement $R_t(\lambda)$ for each wavelength and then calculating:

$Z = \dfrac{R_t(\lambda_1)}{R_t(\lambda_2)^l}$ where l is chosen such that Z is independent of the amount of predetermined chromophore; and mapping the amounts Z at positions indicative of the location within the area of the measurement.

11. (Original) A method according to claim 10, in which $R_t(\lambda)$ is calculated by analysing the received light to identify and measure the proportion of light of each wavelength remitted from the tissue $I_r(\lambda)$; and calculating the ratio of light at each

wavelength returned from the tissue $R_t(\lambda)$.

12. (Currently amended) A method according to claim 10 ~~or 11~~, in which l is calculated such that $Z = \frac{R_d(c,h,\lambda_1)^j}{R_d(c,h,\lambda_2)^{jk}} = \frac{R_t(\lambda_1)^j}{R_t(\lambda_2)^{jk}} = \frac{R_t(\lambda_1)}{R_t(\lambda_1)^l}$ where j and k are such that $2j\alpha(\lambda_1) = 2kj\alpha(\lambda_2) = 1$ where $\alpha(\lambda_1)$ and $\alpha(\lambda_2)$ are the absorbtion coefficients for the predetermined chromophore at each wavelength.

13. (Currently amended) A method according to ~~any one of the preceding claims~~ claim 10, in which the at least two sets of calculations $Z = \frac{R_t(\lambda_1)}{R_t(\lambda_2)^l}$ are carried out, a first calculation with l, such that Z is independent of the amount of a first predetermined chromophore, and a second calculation with l_2 such that Z is independent of the amount of a second predetermined chromophore.

14. (Currently amended) A method according to ~~any one of the preceding claims~~ claim 10 in which the light source used to illuminate the tissue, is of at least three wavelengths, $\lambda_1, \lambda_2, \lambda_3$ and at least three pairs of calculations of Z are made, namely $Z = \frac{R_t(\lambda_1)}{R_t(\lambda_2)^{l1}}$, $Z = \frac{R_t(\lambda_2)}{R_t(\lambda_3)^{l2}}$, $Z = \frac{R_t(\lambda_1)}{R_t(\lambda_3)^{l3}}$ where l_1 l_2 l_3 are each chosen such that Z is independent of the amount of the predetermined chromophore for the respective pair of wavelengths.

15. (Original) Apparatus for monitoring the presence of selected chromophores in a sample of epithelial tissue, independent of the amount of a predetermined chromophore comprising a light source for illuminating tissue with light of at least two different wavelengths $\lambda_1,\ \lambda_2$;

a photoreceptor for receiving images remitted by the illuminated area of tissue at a photoreceptor; and

microprocessor means for analysing the received light to identify and measure the proportion of light of each wavelength remitted from the tissue $I_r(\lambda)$;

calculating the ratio of light at each wavelength returned from the tissue $R_t(\lambda)$, and then calculating: $Z = \frac{R_t(\lambda_1)}{R_t(\lambda_2)^l}$ where l is chosen such that Z is independent of the amount of predetermined chromophore.

16. (Original) Apparatus according to claim 15, also comprising image creation means for receiving a plurality of values of Z, each for a specified location on the tissue, and providing a mapped image representing the value of Z at the plurality of locations on the tissue.